project report

A: A general overview

This is a database-related system. Users can use local json files to create new databases and perform related operations (post questions, search questions, post answers,vote, and List answers).

Here is a small user guide:

Users can connect to mongo DB by entering port , and then the first screen is the login screen ,the user can either enter their user id or choose to skip by entering the letter ‘s’. After logging into the system , the user can select any action from the given three options, which are, post a question(p), search for questions(s) and terminate the program(t). Once chosen to post a question, a prompt which reads that “please enter a title that you want to enter” will be displayed, users are able to type what they would like to write in title and end by entering RETURN. Next users are supposed to edit the body part of the post and a prompt reads that “please enter a body that you want to enter” will be displayed as well. Displayed in the next line, the prompt reads that “Press(e) to add a tag or (f) to finish”, users can begin to edit the tag by entering the letter ‘e’ or enter ‘f’ if they do not wish to edit. Once finished , the post will be properly recorded in the database . Information of Id,tagname, count,excerptPostId,WikiPostId and a prompt informs that successfully posted the question will be displayed. After finishing the posting part, a prompt of three alternative actions will be displayed again. Entering the letter ‘s’ will guide the user to the selection part. Users can type the keyword of what they want to search and use space to spit. Next users are able to choose how many items they want per page and maximum is set to be 5 before displaying a table of information related to the keyword entered by the user with the index to choose in the first column. Once chose the index,users can have a look at details of the selected question. The next screen is about four options of a post action, that is, answer(An),list answers(La),Vote(V),back to memu(m) and terminate the program(t). Users are able to answer the question if choose An, and vote for a post if choose V,m for back to the memu and t for terminate the program.

B: A detailed design of the software:

The program is mainly divided into two parts: establishing a database and user operations.
Build database: link MongoDB, extraction_terms, build Collections
User operations: post questions, search questions, answer, list answer and vote
Build database:

connectToDB: Connect to Database and set global variables
extraction_terms:
Data is a list including many dictionaries.Add key "terms" into each dictionary, which value is extracted terms
buildCollections: Phase1 setup collections

generate_ report: Generate and print report

userReport: Prompt for an user id

create_index : Create index for posts to get ready for search function

User operations:

Prompt Action: Prompt for actions and raise selfExitError if terminated.

Post question:

Post question function is used to post questions. Users can enter title text, body text and any number of tags to post questions. When the question is posted successfully, a success message will appear, otherwise the operation will be repeated.

Search question:

Search question function is used to search keywords in text, body text,and tags in question posts, users can select a specific post to perform follow-up operations. When the user operation is successful, a success message will appear, otherwise the operation will be repeated.

promptpostAction:

Prompt a question action and go to the question action function. Raise selfExitError if terminate

Question action-Answer:

Question action-Answer function is for the user to post an answer. User can set the answer to the question.When the answer is posted successfully, a success message will appear.

Get_id: Get the current maximum Id

Check_tags: Get matching tag information

Question action-List answers: Users are able to see all answers of a selected question which have a limitation of 80 characters in body and the accepted answer will be displayed firstly with a marking star. The creation date, and the score will be displayed as well.Users can select an answer to see all fields of the answer from Posts.

Question/Answer action-Vote:

Question/Answer action-Vote function is used to vote the question or answer. Users can vote on selected questions or answers

C: Testing Strategy:

Test whether the program will get the current maximum id value in get_id module.

Test whether the generated Id is self-increment in the post question module.

Test whether the generated id is self-increment in the post answer module

Test whether the post question will save the owner_id when the user_id is not provided in the post question module.

Test whether the number of tags can be zero when posting a question in the post question module.

Test whether the search function can successfully work if input 4 keywords of a post's title.

For vote function, when log in as an unregistered user, test whether the anonymous user has no constraint when voting, also test whether a registered user has constraint of voting once on the same post.When registered as an unregistered user, test whether information of userId is none after voting.
For post questions, test whether the record of the creation time is set to the current date after posting. Also, we have tested whether the system allows the user to edit more than 1 tag when posting a question and whether the type is set to 1.
For question action list answers, we have tested whether the displaying table of the body column has a limitation of maximum 80 characters on the body field for each answer. We also test whether the accepted answer is the first item of the table when the selected question has an accepted answer.

D：Group work break down strategy

CCID	Time Spent / hour	What have you done
Jinglong	30	Phase 1 Search for questions module Debug
Wentai	25	Post a question module Question action-Answer module Debug Report
Weitong	20	Question action-List answers module. Question/Answer action-Vote module. Debug Report

Method of coordination to keep the project on track:
We shared the project's documentation with the discussion group. Jinlong took the lead in completing the framework of the program(Version1.py), and then each of us started to independently complete our assigned tasks. After completing our own part, we merged the code into the framework completed by Jinglong. After doing this, we started to perform various tests on the program and modify the bugs(Version1.py---Version 10.py). Finally, we obtained Version_demo.py